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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/920,095	07/31/2001	Joel D. Medlock	9824-046-999	4451

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EXAMINER
KUMAR, PANKAJ

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/920,095	MEDLOCK ET AL.
	Examiner	Art Unit	
	Pankaj Kumar	2631	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 June 2005</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10-14,24,25 and 27-37* is/are allowed.

6)☒ Claim(s) *1-9,15-19 and 21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to the claims have been considered but are moot in

view of the new ground(s) of rejection.

Response to Amendment

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1-4, 6, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ozcelik USPN 6,233,277 in view of Brown USPN 6,650,694 and Zarubinsky USPN 5,903,232.

Here is how the references teach the claims:

4.   As per claim 1: An apparatus for processing data in a spread spectrum system (preamble

is not afforded patentable weight), comprising: a decimation circuit (Ozcelik fig. 4: 56) having

an associated decimation factor (not in Ozcelik but would be obvious as explained below); a

memory coupled to said decimation circuit (Ozcelik fig. 4: 40); and an interpolation circuit

coupled to said memory (Ozcelik fig. 4: 82), said interpolation circuit having an associated

interpolation factor (not in Ozcelik but would be obvious as explained below); wherein said

decimation circuit (Ozcelik fig. 4: 56) decimates a data rate of received spread spectrum (not in

Ozcelik but would be obvious as explained below) data by said decimation factor to a decimated

rate and stores said received data into said memory (Ozcelik fig. 4: 82) at said decimated rate;

and wherein said interpolation circuit interpolates (Ozcelik fig. 4: 82) said decimated rate by said

interpolation factor to an interpolated rate and retrieves said received data from said memory

(Ozcelik fig. 4: 82) at said interpolated rate.

5.   What Ozcelik does not teach is that the decimator (Ozcelik fig. 4: 56) has a decimation

factor and decimation rate and that the interpolator (Ozcelik fig. 4: 82) has an interpolation factor

and an interpolated rate. What Zarubinsky teaches is that a decimator has a decimation factor

with which it decimates to a decimation rate to decimate or reduce the amount of the data and

that an interpolator has an interpolation factor to which it interpolates to an interpolated rate to

interpolate or increase or boost amount of data (Zarubinsky col. 1 lines 38-49). Thus, it would

have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at

the decimator having a decimation factor and decimation rate and the interpolator having an

interpolation factor and an interpolated rate as recited by the instant claims, because the

combined teaching of Ozcelik with Zarubinsky suggest the decimator having a decimation factor

and decimation rate and the interpolator having an interpolation factor and an interpolated rate as

recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been

motivated to combine the teachings of Ozcelik with Zarubinsky because Ozcelik suggests

decimation and interpolation (something broad) in general and Zarubinsky suggests the

beneficial use of decimation factor, decimation rate, interpolation factor, interpolation rate such

as converting to a different value (Zarubinsky col. 1 lines 12-20) in the analogous art of

interpolation, decimation.

6.   What Ozcelik does not teach is decimating spread spectrum data. What Brown teaches is

decimating spread spectrum data (Brown col. 29 lines 38-41). Thus, it would have been obvious,

to one of ordinary skill in the art, at time the invention was made, to arrive at decimating spread

spectrum data as indicated by the instant claims, because the combined teaching of Ozcelik with

Brown suggest decimating spread spectrum data as indicated by the instant claims. Furthermore,

one of ordinary skill in the art, would have been motivated to combine the teachings of Ozcelik

with Brown because Ozcelik suggests decimating data (something broad) in general and Brown

suggests the beneficial use of decimating spread spectrum data such as using decimating for

dedicated physical control channels for a CDMA mobile phone in the analogous art of

decimation.

1.   As per claim 2: The apparatus of claim 1, further comprising: a communication processor

(Ozcelik fig. 1: transmission system and receiver comprise communication; HDTV systems have

processors in order to encode the source by compression and decode the received for display;

col. 1 line 61: decoding process, col. 2 lines 6-10: processing compression) coupled to said

interpolation circuit (Ozcelik fig. 1: 30 coupled to receiver which is coupled to transmitter; fig. 2:

46 and 48 are part of 30; fig. 4: decimator and interpolator are part of 46 and 48 respectively) for

receiving data from said memory at said interpolated rate.

2.   As per claim 3: The apparatus of claim 1, further comprising: a dedicated controller for

controlling data retrieval from said memory (Ozcelik fig. 4: 86 is dedicated to control the

retrieval of the value C from memory 40).

3.   As per claim 4: The apparatus of claim 1, further comprising: a micro-processor for

controlling data retrieval from said memory (Ozcelik fig. 4:86 is part of the decoder fig. 1: 30

and 86 retrieves data from memory and col. 2 lines 30-33 or paragraph 12 teaches that the

decoder is part of the processor: col. 2 lines 30-33 or paragraph 12: "Thus, the video decoder of

the present invention provides better picture quality than other known <u>decoding processes where</u>

<u>the processor</u> is limited." Ozcelik does not teach that the processor is a micro-processor. Brown

teaches microprocessor (Brown col. 3 lines 59-64). Thus, it would have been obvious, to one of

ordinary skill in the art, at time the invention was made, to arrive at the microprocessor as recited

by the instant claims, because the combined teaching of Ozcelik with Brown suggest

microprocessor as recited by the instant claims. Furthermore, one of ordinary skill in the art,

would have been motivated to combine the teachings of Ozcelik with Brown because Ozcelik

suggests processor, reducing size, such as reducing size of memory (something broad) in general

and Brown suggests the beneficial use of the processor being microprocessor such as processors

being small and hence microprocessors and they are widely prevalent in microcomputers and

various electronics in general in the analogous art of processing.

4.   As per claim 6. The apparatus of claim 1, wherein said decimation factor is hard-coded

into said decimation circuit (Ozcelik col. 1 lines 43-45: "predetermined decimation scheme";

since it is predetermined, it is hard-coded as opposed to adaptively changed in the processors or

Ozcelik).

7.   As per claim 21: A method for processing data in a spread spectrum system, comprising

the steps of: receiving data at a sampling rate (Ozcelik fig. 2: inherent for digital data 22 to be

sampled and thus have a sampling rate); decimating (Ozcelik fig. 4: 56) said sampling rate by a

decimation factor (not in Ozcelik but would be obvious as explained below) to obtain a

decimated rate (Ozcelik fig. 4: output of 56); storing said data into a memory at said decimated

rate (Ozcelik fig. 4: 82); interpolating said decimated rate to obtain an interpolated rate (Ozcelik

fig. 4: 82); and outputting said data from said memory at said interpolated rate to a

communication processor (Ozcelik fig. 1: output of 30 going to display 26; since it is displaying, it is communicating).

8.   What Ozcelik does not teach is that the decimator (Ozcelik fig. 4: 56) has a decimation factor and decimation rate and that the interpolator (Ozcelik fig. 4: 82) has an interpolation factor and an interpolated rate. What Zarubinsky teaches is that a decimator has a decimation factor with which it decimates to a decimation rate to decimate or reduce the amount of the data and that an interpolator has an interpolation factor to which it interpolates to an interpolated rate to interpolate or increase or boost amount of data (Zarubinsky col. 1 lines 38-49). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the decimator having a decimation factor and decimation rate and the interpolator having an interpolation factor and an interpolated rate as recited by the instant claims, because the combined teaching of Ozcelik with Zarubinsky suggest the decimator having a decimation factor and decimation rate and the interpolator having an interpolation factor and an interpolated rate as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Ozcelik with Zarubinsky because Ozcelik suggests decimation and interpolation (something broad) in general and Zarubinsky suggests the beneficial use of decimation factor, decimation rate, interpolation factor, interpolation rate such as converting to a different value (Zarubinsky col. 1 lines 12-20) in the analogous art of interpolation, decimation.

9.   Ozcelik teaches decimating but does not teach decimating said sampling rate. The office takes official notice that when a decimator is receiving samples at a sampling rate, that the decimator is reducing the number of samples by picking every x sample which reduces or

decimates the sampling rate. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to modify the prior art teaching of Ozcelik with the decimator decimating said sampling rate as recited by the instant claims, because Ozcelik suggests the decimator in fig. 4: 56, 46 is receiving digital samples via other components in fig. 2 22 to 46 in the analogous art of processing data by decimation.

10.   What Ozcelik does not teach is receiving spread spectrum data. What Brown teaches is receiving spread spectrum data (Brown title: receiver; col. 1 line 46: spread spectrum). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at receiving spread spectrum data as indicated by the instant claims, because the combined teaching of Ozcelik with Brown suggest receiving spread spectrum data as indicated by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of Ozcelik with Brown because Ozcelik suggests receiving data (something broad) in general and Brown suggests the beneficial use of receiving spread spectrum data such as data needed for CDMA communications in the analogous art of reception.

5.   As per claim 22. The method of claim 21, further comprising the step of: retrieving data from said memory in accordance with instructions from a micro-processor. (Ozcelik fig. 4: 86 is part of the decoder fig. 1: 30 and 86 retrieves data from memory and col. 2 lines 30-33 or paragraph 12 teaches that the decoder is part of the processor: col. 2 lines 30-33 or paragraph 12: "Thus, the video decoder of the present invention provides better picture quality than other known decoding processes where the processor is limited." Ozcelik does not teach that the processor is a micro-processor. Brown teaches microprocessor (Brown col. 3 lines 59-64). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was

made, to arrive at the microprocessor as recited by the instant claims, because the combined

teaching of Ozcelik with Brown suggest microprocessor as recited by the instant claims.

Furthermore, one of ordinary skill in the art, would have been motivated to combine the

teachings of Ozcelik with Brown because Ozcelik suggests processor, reducing size, such as

reducing size of memory (something broad) in general and Brown suggests the beneficial use of

the processor being microprocessor such as processors being small and hence microprocessors

and they are widely prevalent in microcomputers and various electronics in general in the

analogous art of processing.

6.   As per claim 23. The method of claim 21, further comprising the step of: retrieving data

from said memory in accordance with instructions from a dedicated controller (Ozcelik fig. 4: 86

is dedicated to control the retrieval of the value C from memory 40).

11.   Claims 5, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozcelik

USPN 6,233,277 in view of Brown and Zarubinsky as applied to claim 1 above, and further in

view of Lovinggood USPN 6,697,603. See prior action for details.

12.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozcelik USPN

6,233,277 in view of Brown and Zarubinsky as applied to claim 1 above, and further in view of

Banerjea USPN 5,719,944. Here is how the references teach the claim:

13.   As per claim 8. The apparatus of claim 1, wherein said interpolation factor is hard-coded

into said interpolation circuit (not in Ozcelik but would be obvious). Ozcelik teaches the

interpolation circuit but does not teach that its interpolation factor is hard coded. Banerjea

5719944 teaches that interpolation factor is hardcoded (Banerjea col. 3 lines 15-21). Thus, it

would have been obvious, to one of ordinary skill in the art, at time the invention was made, to

arrive at the interpolation factor being hardcoded as recited by the instant claims, because the

combined teaching of Ozcelik with Banerjea suggest interpolation factor being hardcoded as

recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been

motivated to combine the teachings of Ozcelik with Banerjea because Ozcelik suggests an

inexpensive system (something broad) in general and Banerjea suggests the beneficial use of

interpolation factor being hardcoded such as hard coded variable costs less when developing a

system than a programmable variable in the analogous art of interpolation.

14.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozcelik USPN

6,233,277 in view of Brown and Zarubinsky as applied to claim 1 above, and further in view of

McDonough USPN 5,778,024. See prior action for details.

15.   Claims 15-17, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ozcelik USPN 6,233,277 in view of Brown and Zarubinsky as applied to claim 1 above, and

further in view of Levin USPN 6,639,906. See prior action for details.

Allowable Subject Matter

16.   Claims 10-14, 24, 25, 27, 28-32, 33-37 are allowed. See prior action for details.

Conclusion

17.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The

examiner can normally be reached on Mon, Tues, Thurs and Fri after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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